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NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

For Supervisor's use only

Level 1 Human Biology, 2007

90176 Describe how humans respond to pathogens

Credits: Two

9.30 am Friday 23 November 2007

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should answer ALL the questions in this booklet.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–8 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

For Assessor's use only		Achievement Criteria	
Achievement		Achievement with Merit	Achievement with Excellence
Describe how humans respond to pathogens.	<input type="checkbox"/>	Explain how humans respond to pathogens.	<input type="checkbox"/>
Overall Level of Performance		<input type="checkbox"/>	

You are advised to spend 30 minutes answering the questions in this booklet.

QUESTION ONE

Infection by a group of viruses known as Noroviruses may cause vomiting.

- (a) Describe TWO symptoms, other than vomiting, of a viral infection.

(1) _____

(2) _____

- (b) Explain how a viral infection can be **spread** from one person to another, **and** consider how the virus gets into the body.

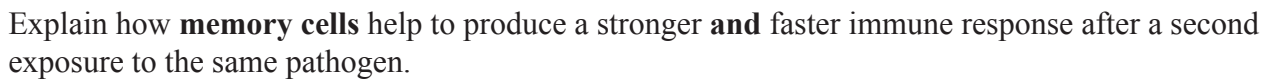
- (c) The body has a range of first-line defences to prevent the entry of pathogens.

Describe how TWO different defence mechanisms prevent the entry of pathogens into the body.

(1) _____

(2) _____

When the body is exposed to a pathogen an immune response occurs. If the body is exposed again to the **same** pathogen, the response is stronger and faster as shown in the graph below.

[illegible]

Discuss how the body fights off an infection. In your answer **explain** the roles of:

- in fighting off an infection.

[illegible]

**Note that Question Four
is on the next page.**

(a) Describe how a newborn baby has **natural immunity**.

- the response of the body to the vaccine
- the effectiveness of the vaccine against the pathogen.

[illegible]

